



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,225	10/31/2005	Jose Da Conceicao	3129-6838US	6251

24247 7590 04/06/2007  
TRASK BRITT  
P.O. BOX 2550  
SALT LAKE CITY, UT 84110

EXAMINER

MONDT, JOHANNES P

ART UNIT PAPER NUMBER

3663

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
31 DAYS	04/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/528,225	DA CONCEICAO, JOSE	
	<b>Examiner</b>	<b>Art Unit</b>	
	Johannes P. Mondt	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-55 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

1. Applicant is first required to elect a single one of the following Species:

- Species 1: exhaust first wall constituted from carbon-carbon composite and Kevlar (claim 3).
- Species 2: exhaust wall constituted from carbon-carbon composite and graphite (claim 4).

2. Upon election of either Species 1 or 2 Applicant is further required to elect a single of the following Species:

- Species a: magnet constituted of copper and ceramic material (claim 5).
- Species b: magnet of superconducting coils constituted of Nb<sub>3</sub>Sn (claim 6).
- Species c: magnet of superconducting coils constituted of Nb<sub>3</sub>Al (claim 7).

Art Unit: 3663

- Species d: magnet of superconducting coils constituted of  $\text{HgBa}_2\text{Ca}_2\text{Cu}_3\text{O}_{8.33}$  with Ti and variations of oxygen concentrations (claim 8).

3. Upon election of either Species a, b, c, or d, Applicant is further required to elect a single of the following Species:

- Species  $\alpha$ : the energetic beam is constituted of photons (claim 11).
- Species  $\beta$ : the energetic beam is constituted of particles of light elements of the periodic table (claim 12).
- Species  $\gamma$ : the energetic beam is constituted of heavy elements of the periodic table (claim 13).
- Species  $\delta$ : the energetic beam is constituted of neutrons and anti-neutrons (claim 14).

4. Upon election of either Species  $\alpha$ ,  $\beta$ ,  $\gamma$ , or  $\delta$ , Applicant is further required to elect a single of the following Species:

- Species A: reactor vessel cylindrical (claims 15-18, 32 and 36).
- Species B: reactor vessel hemispherical (claims 19, 28-30, 35 and 37).
- Species C: reactor vessel spherical (claims 25-27, 33-34, 36 and 37).

Art Unit: 3663

5. Upon election of Species A, Applicant is further required to elect a single one among the following Species:

- Species A-I: reactor vessel cylindrical and coils constituted of NiTi (claim 15).
- Species A-II: reactor vessel is cylindrical and coils constituted of copper, aluminum and silver (claim 16)
- Species A-III: reactor vessel is cylindrical and coils constituted of copper, aluminum and niobium (claim 17); while

6. Upon election of Species B Applicant is required to elect a single of the following Species:

- Species B-I: reactor vessel hemispherical and target of aluminum (claim 28).
- Species B-II: reactor vessel hemispherical and target of tungsten (claim 29).
- Species B-III: reactor vessel hemispherical and target of gold (claim 30).

7. Upon election of Species C Applicant is further required to elect a single one of the following Species:

- Species C-I: spherical reactor vessel with target of aluminum (claim 25).
- Species C-II: spherical reactor vessel and target of tungsten (claim 26).
- Species C-III: spherical reactor vessel and target of gold (claim 27).

8. Upon election of either Species A, B, or C, Applicant is further required to elect a single one of the following Species:

- Species Sh-1: reactor vessel shield of lead (claim 20).
- Species Sh-2: reactor vessel shield of carbon-carbon composite (claim 21).

9. Upon election of either Species Sh-1 or Sh-2, Applicant is further required to elect a single one of the following Species:

- Species R-1: capsule containing inner rod of aluminum (claim 22).
- Species R-2: capsule containing inner rod of tungsten (claim 23).
- Species R-3: capsule containing rod of gold (claim 24).

Art Unit: 3663

10. Upon election of either Species Sh-1 or Species Sh-2, Applicant is further required to elect a single one of the following Species:

- Species T-C: target is cylindrical (claims 31, 32, 38-43 and 49).
- Species T-S: target is spherical (claims 33-35, 38-43).
- Species T-H: target is ellipsoid (claims 36-40).

11. Upon election of either of Species T-C, T-S or T-H, Applicant is further required to elect a single one of the following Species:

- Species T-(fusion+fission): target constituted of uranium/plutonium with fusionable fuel, hence fissionable *and* fusionable material (claims 31-40, 43, 46 and 47).
- Species T-fusion: target constituted of only

Art Unit: 3663

fusionable material (claims  
41-42).

12. Upon election of Species T-(fusion+fission) or T-fusion, Applicant is further required to elect a single one of the following Species:

- Species Ex-Bm:  
explosions initiated by  
energetic beams  
(claims 38, 40, 41, 43,  
46, 47 and 48).
- Species: Ex-Chem:  
explosions initiated by  
chemical high  
explosives (claims 39  
and 42).

13. Upon election of Species Ex-Bm Applicant is further required to elect a single one of the following Species:

- Species Ex-Bm-I:  
energetic beam is  
laser beam (claims  
38-40,41, 43, 47,  
48).



- Species Ex-Bm-p:  
energetic beam is  
particle beam  
(claims 38, 41 and  
46).

15. Upon election of either Species Ex-Bm or Species Ex-Chem, Applicant is further required to elect a single one of the following Species:

- Species TS-Au:  
tamper shell of gold  
(Au) (claim 44).
- Species TS-Ta:  
tamper shell of  
tantalum (Ta) (claim  
45).

15. Upon election of either Species TS-Au or TS-Ta, Applicant is further required to elected a single of the following Species:

- Species DT:  
fusionable fuel  
is DT (only)  
(claims 31-42).
- Species DTH<sub>3</sub>:  
fusion fuel is DT

Art Unit: 3663

with  $^3\text{He}$  (claim  
49).

16. Upon election of either Species DT or DTH<sub>3</sub>, Applicant is further required to elect a single one of the following Species:

- Species PS-sc:  
protector shield of  
steel with carbon-  
carbon composit  
(claim 50).
- Species PS-Kg:  
protector shield of  
Kevlar and graphite  
(claim 51).

Upon election of either Species PS-sc or PS-Kg, Applicant is further required to elect a single one of the following Species:

- Species In-EM:  
electromagnetic  
injector system  
(claim 52).
- Species In-ED:  
electrodynamic

injector system  
(claim 53).

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

See listing of the claims after each Species.

The following claim(s) are generic: claims 1-2, 9, 10, 54 and 55.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: As shown by Monkhorst et al (USPAT 6,611,106 B2) (Figures 1 and 27 and their discussions) a (thermonuclear fusion) propulsion motor held by two cylindrical rings (inner ring containing thermonuclear fuel 335 and outer ring 305 fixed with cylindrical supports, and a third cylindrical ring (outer annulus of betatron coil 320), that will sustain the reactor

Art Unit: 3663

room or chamber 310 of the main drive placed between the two terminal rings fixed to the cylindrical ring sustaining the exhaust wall 850 (Fig. 27) in hemispherical shape (Fig. 16) capable of protecting the magnet coils (both 320 and 325) as driver of magnetic structure inside the reactor room. In conclusion, the Species lack the same or corresponding technical features as inventions, because claim 1 is not inventive.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johannes P. Mondt whose telephone number is 571-272-1919. The examiner can normally be reached on 8:00 - 18:00.

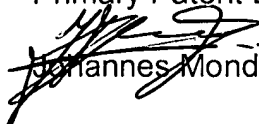
Art Unit: 3663

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JPM  
April 1, 2007

Primary Patent Examiner:

  
Johannes Mondt (TC3600, Art Unit: 3663)